

numerous and important than would be generally supposed by those who have not looked closely into the matter. To a great part of the civilized world the taking of the cod, the herring, the salmon, the mackerel, the sardine, the seal and the other fishes, is of great value, and gives employment to hundreds of thousands of persons. The oil obtained from the seal, cod, shark, etc., is used for lamps, medicine, and in industry. Many parts of fish are employed in the arts and manufactures,—as the scales of the bleak for making false pearls, and those of other fish for making ornaments; the skins of the seals and the porpoises for tanning purposes. Isinglass is obtained from the air or swimming bladders of many. Fish roes are not only used as fish delicacies, but also for bait in some fishing grounds, and excellent guano is made from the offal and the bones of fish. *The sea is more abundantly stocked with living creatures than the land.* In all parts of the world a rocky and partially protected shore, perhaps supports, in a given space, a greater number of individual animals than any other station. The sea is filled with animals of several kinds, and each layer of water in depth, seems to have its own varieties, thus resembling the changes which take place, according to elevation, in the organized portions of the land. The animals are among the mightiest and among the smallest. There are swimming beasts, as whales, seals and walruses. There are fishes of various kinds and sizes, crustaceous, soft or jelly fishes, the molluscs, down to those creatures resembling live plants. All these are peculiar to the sea or the fresh waters; and the ocean has its marine plants,—sea weeds, which remain growing on the ground shoal or rise to the surface and then float. These, too, have many useful or economical applications."

The harvest of the sea has not yet been attended to and garnered to the same extent as that of the land. Some nations, such as the Chinese, have, it is true, long given close attention to the profitable utilization of its commercial products; and several European nations and the Americans have also prosecuted certain fisheries, but systematic and scientific arrangement has only of late years been specially directed to the various branches which have been termed pisciculture, acquiculture and ostreiculture, and the transfer of the fishes of one locality to another district. By all civilized and commercial nations, especially the Dutch, the English, the Norwegian,